

I. A NEW PERSPECTIVE

The new century finds the United States Coast Guard at a critical crossroads. Every day, the men and women of the Coast Guard put their lives on the line to save others in danger at sea, enforce the nation's laws and treaties, protect the marine environment, ensure a safe and efficient marine transportation system, and support America's diplomatic and defense interests world wide. However, despite the American public's warm regard for its "Coasties," questions have been raised about the continued relevancy of the Coast Guard for these mission areas. Furthermore, for some there is great uncertainty whether it would be "good government" to make the significant investment in scarce public resources – even in an era of projected \$1 trillion federal budget surpluses – for programs that would in effect recapitalize the Coast Guard for its third century of service to the United States, particularly in the contributions that the Service can make to the nation's maritime security.

"Indeed, these are perplexing times for the Coast Guard," James Kitfield noted in the October 1999 issue of *National Journal*. "In recent years,

the Coast Guard has seen a dramatic increase in its role of interdicting drug traffickers, enforcing fisheries legislation, and controlling alien migration at sea. Overseas, its ships routinely operate alongside Navy vessels to enforce maritime embargoes. A heavy hurricane season has highlighted the mission with which most Americans identify the Coast Guard – saving lives at sea. Yet, because the Coast Guard resides in the Department of Transportation during peacetime, and because it remains an oft-neglected stepchild in terms of its significant law enforcement and national security roles, it finds itself under severe budget strain.[1]

In that regard, as the debates over the allocation of federal resources continue, it is important to keep in mind that the Coast Guard is a **military, multimission, maritime service** within the Department of Transportation and one of the nation's five Armed Services.[2] For more than two centuries, its core role has been to protect the public, the environment, and U.S. economic and security interests, in America's ports and inland waterways, along the nation's coasts, on international waters, or in any maritime region in which U.S. interests may be at risk. Since its founding as the Revenue Cutter Service in 1790, the Coast Guard has continued to provide unique services and benefits to America's maritime security because of its distinctive blend of humanitarian, law enforcement, diplomatic, and military capabilities, which undergird the Service's five maritime security roles:

- Maritime Safety
- Maritime Mobility
- Maritime Law Enforcement
- Marine Environmental Protection
- National Defense



"There is a growing awareness among Americans of the many ways the oceans influence our daily lives. Farmers in the nation's heartland depend upon weather systems driven by the interaction of the oceans and atmosphere to nourish their crops. Citizens who have never seen an ocean may benefit from energy and food from the waters off our coasts. Marine organisms provide the cure for many diseases and the promise of many more cures. Ocean-going vessels carry the bulk of our world trade, linking us to the global marketplace and keeping our economy strong. Our naval forces, which preserve the international freedoms of navigation so crucial to maritime commerce and global stability, use ocean data daily in their worldwide operations. A strong national security is essential to our nation's ocean policy."

The Honorable Richard Danzig
Secretary of the Navy
The Honorable William M. Daley
Secretary of Commerce
Turning to the Sea: America's Ocean Future
September 1999

[1] James Kitfield, "The Stepchild Steps Out," *National Journal*, October 1999.

[2] *Coast Guard 2020: Ready Today...Preparing for Tomorrow* (Washington, D.C.: U.S. Coast Guard, 1998), pp. i, 1, 3. At his change of command ceremony in May 1998, Coast Guard Commandant Admiral James M. Loy stated that "Since 1790, we have been a military, multimissioned, maritime service. That simplicity offers great strength...Military...Multimissioned...Maritime.... They remain great imperatives for us, not because they're traditional, but because they give us the discipline, the adaptability, and the focus to accomplish the difficult tasks America demands of us." Appendix A provides a summary of legislative mandates for the Coast Guard's national maritime security roles, missions, and tasks. See also, "21st Century Hemispheric Maritime Security: A USCG Deepwater Vision" (Headquarters, U.S. Coast Guard G-OC, 30 October 1998), which served as the foundation for this report.

U.S. Coast Guard Maritime Security Roles

- Maritime Safety: Save lives and property at sea
- Marine Environmental Protection: Protect living and non-living marine resources
- Maritime Mobility: Provide a safe and efficient marine transportation system
- Maritime Law Enforcement: Uphold laws and treaties and defend maritime borders
- National Defense: Conduct military and defense operations

The objective of this report is to help the Coast Guard, the Departments of Transportation and Defense, other executive departments and agencies, the Congress, the Service's "partners" and "share-holders" – in state and local governments, U.S. and foreign industry, foreign governments, and private organizations in the United States and overseas – and the American public think broadly about future national security dynamics and trends. Important issues have been addressed – how these dynamics and trends will affect **America's maritime security** and hence the Coast Guard's current and future roles, missions, functions, and requirements. It discusses an expansive concept of U.S. maritime security interests, focusing on current and future threats to America's interests in its territorial seas and Exclusive Economic Zones (EEZs) as well as on the high seas. It provides an overview of the historical, strategic, policy, and operational contexts for the Coast Guard's maritime security roles, missions, functions, and tasks, and how the Service can most effectively and efficiently serve the United States in the 21st century. And it addresses the platforms and systems capabilities needed to satisfy current and future requirements.

A key focus of this report is on the Coast Guard's "Deepwater" operating environment and enduring as well as emerging needs in this region. The Deepwater operational area has been defined by the Service as operations conducted 50 miles or more to sea, although clearly Deepwater assets protect U.S. maritime security in regions much closer to the shore. Many of the Coast Guard's Deepwater capital assets are approaching or are at the ends of their service lives in block obsolescence. To deal with the need to modernize and replace these assets, the Coast Guard's **Integrated Deepwater Systems (IDS) Capabilities Replacement Project** has mapped out an innovative approach and program-plan to address all roles, missions, and functions and the subsystems, systems, and platforms needed to carry out the Service's multiple mandates.[3] Thus, another important objective of this paper is to inform U.S. and possible foreign industry partners about the full spectrum of Coast Guard Deepwater requirements, operations, and programs for the future.

U.S. Maritime Security Interests and Threats

America's maritime interests – its reliance upon the seas for food, commerce, and defense – have endured since colonial days. Today, on the cusp of a new millennium, the United States remains a major maritime nation, with a broad array of interests and concerns in the Arctic Ocean and Bering Sea, the Pacific Ocean, the Caribbean and Gulf of Mexico, and the Atlantic, which wash some 95,000 miles of coastline – in addition to many thousands of miles of river, lake, and navigable waterway shorelines throughout the United States. (Figure 1 illustrates the extent of U.S. territorial seas and exclusive economic zones.) America's future will remain tied inextricably to the seas. The seas link the nation with world commerce and trade, and allow us to project military power far from our shores to protect important U.S. interests and friends. But the seas also serve as highways for a bewildering variety of transnational threats and challenges that honor no national frontier.

[3] Specific system- and platform-level performance requirements for the Integrated Deepwater Systems elements has been provided by the Deepwater Project Office (G-ADW), "System Performance Specifications (SPS) for the Integrated Deepwater System," Attachment 0001/DTCG23-98-R-ADW0001, PRF-ADW-0001, 21 September 1998. Rather than replicate that information, this report addresses overarching strategic and operational concepts that the Operations Capability Directorate (G-OC), Headquarters, U.S. Coast Guard, believes are important. For additional public information, see the Deepwater Acquisition web page: www.uscg.mil/deepwater/.

Figure 1. U.S. Territorial Seas and Exclusive Economic Zones



As the Coast Guard looks to its third century of service, a complex mosaic of maritime users, interests, and transnational dangers – including pollution, illegal migration, drug-smuggling, international terrorism, and weapons proliferation, to name but a few – will challenge America as never before. To deal with these threats and challenges, the Service must continue to carry out several fundamental tasks that have been constant throughout the Coast Guard's history:

- **Provide credible presence** in and **conduct surveillance** of critical maritime regions
- **Detect, classify, and identify** targets of interest
- **Intercept and prosecute** those targets

At the dawn of the 21st century, the Coast Guard carries out its Deepwater tasks through routine patrols and focused, time-critical sorties conducted by high- and medium-endurance cutters, patrol boats and fixed- and rotary-wing aircraft. The success of these operations, in turn, depends upon Coast Guard, Joint-Service, and national-level command-and-control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems. Much of what the Coast Guard does is aimed at deterring or preventing dangers and threats from materializing in the first place, and responding quickly and effectively to emergencies when deterrence and prevention are frustrated. These core tasks will be the basis for the Coast Guard's multifaceted contributions to the Nation's maritime security throughout the new century, whether the mission-objective is to rescue the distressed, to ensure safe maritime transport, to protect America's living marine resources and environment, to uphold the law on the sea, or to support U.S. diplomatic and military interests in far-flung regions of the world.

In essence, the Coast Guard will continue to provide maritime security that is a critical element in ensuring a healthy and clean marine environment, robust living and non-living marine resources, safe and efficient marine transportation and trade, homeland defense and maritime sovereignty – protecting U.S. citizens, interests, and friends at home and, increasingly, abroad. This is an expansive national security construct that reflects the realities of the next century. Indeed, no longer focused solely on military threats to the United States,

America's Maritime Security Interests

- Living marine resources – protection of fisheries and other living marine resources
- Marine environment – protection of living marine resources' habitats, pollution prevention and control, response to and remediation of pollution incidents
- Marine transportation and trade – safe and efficient ports, harbors, and waterways; aids to navigation, domestic and international ice-breaking and patrol, safety of life at sea, search and rescue, response to maritime tragedies
- Maritime sovereignty and defense – protection of maritime borders, law enforcement, military and defense operations

"Most threats to U.S. interests were indigenous: voracious forces of societal change tearing at the fabric of developing societies; destabilising overpopulation and overurbanization, coupled with underproductivity; new social, economic, and political ideas contesting with centuries-old rigidities; radical nationalism and militant sectarianism; clashes of ethnic and religious prejudices; and stress on educational systems wholly inadequate for dealing with the foregoing or with the onrush of new technologies compressing travel time and opening media vistas of distant lands of unimaginable wealth."

Discriminate Deterrence,
January 1988
Regional Conflict Working Group
Commission on Integrated Long-Term Strategy

"national security" encompasses a rich tapestry of economic, social, environmental, political, diplomatic, cultural, and military dimensions. Indeed, a much more expansive construct has been articulated by the *President's National Security Strategy*, which recognizes that diverse and numerous threats – regional or state-centered threats, transnational threats, the spread of dangerous technologies, foreign intelligence collection, and failed states – must be countered through an integrated approach to defend the nation, shape the international environment, respond to crises, and prepare for an uncertain future.[4] Likewise, more than simply "guarding the coast," the Coast Guard has similarly broad responsibilities for safeguarding the global commons, and brings unique capabilities to the nation's full-spectrum, multi-agency response to America's maritime security needs.



America's need for maritime security does not limit Coast Guard operations to the waters off U.S. coasts and the "near-abroad" of the Western Hemisphere. Without doubt, many – if not most – critical Coast Guard roles, missions, functions, and operations will continue to be focused on safeguarding America's interests and needs in U.S. inland waters, territorial seas, and economic zones, as well as on the high seas areas of the regions close by U.S. sovereign territory. Still, waters and resources under U.S. jurisdiction total nearly 3.4 million square miles in area and encompass some of the most inhospitable marine environments in the world. (The eight U.S. central/western Pacific EEZs – surrounding the Hawaiian Islands and the Trust Territories of the Pacific – comprise more than 40 percent of the total U.S. EEZ area.) Even more importantly, the maritime security concept signifies that the Coast Guard must have the multimission capabilities to serve U.S. policies and support U.S. interests – alone or in concert with other U.S. agencies, allied and friendly forces, and in support of international organizations – in home waters or in any maritime area in which the President and U.S. regional Commanders-in-Chief (CinCs) determine the Coast Guard can provide important benefits to the nation. In what has been called a "pivotal states strategy," the Coast Guard must be seen as a key U.S. actor in American foreign policy aimed at a select group of countries – "pivotal states" – whose futures were poised at critical turning points, and whose fates would significantly affect regional, and even international, stability:

The repercussions of rapid change in the developing world, including population growth, disruptive migration, and popular fundamentalist movements, are increasingly affecting industrialized countries, and even the United States can no longer isolate itself from them. Because it argues for both bilateral (and, in a complementary form, multilateral) cooperation to mitigate such pressures, a pivotal states strategy would encourage American policy makers to face these challenges before they directly threaten U.S. national security.[5]

General Charles E. Wilhelm, USMC, Commander-in-Chief, U.S. Southern Command, underscored this perception of the Coast Guard's roles in U.S. foreign policy in a 26 May 1999 letter to Mortimer L. Downey, Deputy Secretary of Transportation:

[4] White House, *A National Security for a New Century* (Washington, D.C.: GPO, October 1998).

[5] Robert Chase, Emily Hill, and Paul Kennedy, eds., "Introduction" to *The Pivotal States: A New Framework for U.S. Policy in the Developing World* (New York: W.W. Norton & Company, 1999), p. 6.

The United States Coast Guard brings tremendous capabilities and contributions across a wide spectrum of regional engagement activities. Its role in the Southern Theater is a significant one, and will only grow as we continue to pursue a National Security Strategy that directs us to engage and shape an extremely diverse, dynamic, and expansive environment.[6]

However, compared to the threats confronting the Nation or to the technology available to the Service, the Coast Guard's ability to carry out its core tasks has declined, in some instances significantly. During the past half-century, the Service's missions have increased in number and complexity. As technology and the sophistication of the threats and challenges have increased, Coast Guard capabilities have remained constant, at best. Moreover, in some military/defense operations areas – littoral anti-submarine warfare or naval gunfire support, for example – there has been marked degradation, if not abandonment of capability. With this situation in mind, the Integrated Deepwater Systems Project is providing the opportunity to assess and prioritize all requirements so that the Coast Guard can respond with the right combination of capabilities in its shoreside command-and-control systems, cutters, and aircraft.

“Deepwater” Operational Environment

Unlike Coast Guard operations in coastal and inland waterways, Deepwater missions typically require a long-term, continuous presence away from home stations, sometimes for months on end, and the ability to operate independently in severe environments – from Arctic to tropical and equatorial climates – 24 hours a day, every day, wherever the demands of national maritime security require a Coast Guard humanitarian, law enforcement, or military presence. Certainly, other marine, coastal, and inland waterways are vital to the Nation, and these will grow in importance as burgeoning and many times competing demands are placed on these regions. And, the adaptable and multimission character of Deepwater cutter, aircraft, and command-and-control systems allows them to make significant contributions to the Service's missions and tasks in virtually all operating areas. However, the operational demands of the Service's Deepwater missions and tasks can be completely satisfied only with systems and platforms designed and engineered for this daunting environment.[7]

Nevertheless, the Coast Guard's existing systems and platforms capabilities to carry out all of the current and future roles, missions, and tasks in support of America's maritime security in the Deepwater operating environment are increasingly in doubt. The Deepwater demands are compelling, calling for a multi-dimensional capability to carry out numerous missions and tasks – above, on, and perhaps even below the surface of the sea – simultaneously (e.g., prosecuting a search and rescue case while at the same time engaged in counter-drug surveillance and fisheries enforcement) and often across vast areas of ocean space. Although there are likely to be significant changes during the next 40 years, in 1996 the then-nascent Deepwater Project identified 14 separate mission- and task-areas to “bound” the Deepwater requirements “problem”:

- Search and rescue
- International Ice Patrol
- Humanitarian response to disasters
- General law enforcement

U.S. Coast Guard Deepwater Operations

- Generally 50 nautical miles or more from U.S. shores
- Long transit distance to reach operating areas
- Extended on-scene presence independent of support
- Sustained operations in severe weather and high sea conditions
- Forward-deployed, often with other U.S., allied, and coalition naval, and maritime forces

[6] General Wilhelm's letter to Deputy Secretary Downey is included in its entirety in the Appendix.

[7] For example, Deepwater cutters and command-control-and-communications (C3) systems played key roles in the nation's responses to the massive *Exxon Valdez* oil spill in Prince William Sound, Alaska, in 1989 and the *Argo Merchant* spill off Nantucket, Massachusetts in 1976, as well as the 1996 TWA Flight 800 tragedy.

- Protection of living marine resources
- Maritime pollution enforcement and response
- Foreign vessel inspection
- Lightering zone enforcement
- Alien migrant, drug, and maritime interdiction operations
- Forward-deployed support to regional military commanders-in-chief in peacetime engagement and crisis-response
- Military environmental response
- U.S. homeland defense
- Port security and force protection
- Joint/combined combat operations in smaller-scale contingencies and major theater war

Understanding the block obsolescence confronting much of the Coast Guard's Deepwater forces, and the growing inability to meet the Service's Deepwater requirements effectively and efficiently, the Deepwater Project continues to address the need to



upgrade, modernize, and replace the Service's aging fleet of cutters and aircraft, as well as its command and control infrastructure, with an integrated system of shoreside, afloat, aviation, and information technology assets. The IDS Project is by far the largest acquisition project ever undertaken by the Coast Guard. And, it is the first time that a federal agency – other than the Department of Defense – has approached an acquisition program from an entire mission perspective. The Deepwater Project has set in place an integrated, “system-of-systems” approach that embraces today's and tomorrow's sensors, command-and-control systems, shoreside facilities, boats and cutters, aircraft, and people in an innovative “network-centric” concept of operations that encompasses all five core missions.

The Coast Guard's Deepwater acquisition program approach has been so innovative that in June 1999 it was designated a “Reinvention Laboratory” under the National Partnership for Reinventing Government. As such, it was empowered to test new ways of doing its job: “we've dramatically reformed the way we carry out the people's business,” Rodney E. Slater, Secretary of Transportation, stated. “The Deepwater project will enhance America's national security by helping the Coast Guard perform its duties with maximum efficiency and savings to the taxpayer.”[8]

Key to the Deepwater Project's philosophy is the need to leverage commercial and military technologies and innovation to develop a completely integrated, multimission, and highly flexible Deepwater operating system at the lowest possible total ownership cost – including research and development, design and engineering, acquisition, and life-cycle operations and support – to carry out the diverse and demanding roles, missions, and tasks that lie ahead.

An important development for the Coast Guard's Deepwater future was the approval of the Joint U.S. Navy-Coast Guard Policy Statement on the National Fleet.[9] Signed by the Chief of Naval Operations, Admiral Jay Johnson, and Coast Guard Commandant

[8] “Coast Guard Deepwater Acquisition Project Designated as Government Reinvention Laboratory,” Department of Transportation Press Release, CG 11-99, 24 June 1999.

[9] NATIONAL FLEET – A Joint Navy/Coast Guard Policy Statement, 21 September 1998. See Appendix C for the full text of the policy statement, and also Vice Admiral Thomas Fargo, USN, and Rear Admiral Ernest Riutta, USCG, “A ‘National Fleet’ for America,” U.S. Naval Institute *Proceedings*, April 1999, pp. 48-51.

Admiral James Loy, the policy calls for both services to synchronize planning, procurement, training, and operations to provide the highest level of joint maritime capability for the nation's investment – a “shared purpose and common effort” focused on tailored operational integration of the Navy's and Coast Guard's multimission surface platforms. As Vice Admiral Thomas Fargo, then-Deputy Chief of Naval Operations for Plans, Policy, and Operations (N3/N5), and Rear Admiral Ray Riutta, Vice Commandant for Operations, noted in the April 1999 U.S. Naval Institute *Proceedings*

The Navy-Coast Guard collective task is to build fully interoperable, multimission, naval and maritime forces for tomorrow's challenges. To do that, the Navy and Coast Guard must work together even more closely if they are to continue to provide the best maritime capabilities in the world at the best price for the U.S. citizen.[10]

In this way, the Coast Guard will recapitalize for its future, to ensure and sustain its ability to meet the demands thrust upon it, especially in its Deepwater operating environment. The Service has put in place a comprehensive and objective program to assess requirements and acquire the assets to ensure that it can continue to meet the Nation's needs, and fulfill its calling as a unique instrument of U.S. national security – in inland waters, ports, and harbors; in America's territorial sea and Exclusive Economic Zone; and on the high seas.

A Unique Instrument of *Maritime* Security

Maritime security is the Coast Guard's unique contribution to U.S. national security in the nation's inland waterways, ports, and offshore maritime domains.[11] It embraces all elements of the cultural, social, environmental, economic, political, diplomatic, and military dimensions that today shape America's national security strategy, policies, and programs for economic prosperity and global engagement. The Coast Guard's unique status as a U.S. Armed Service with broad law enforcement authorities and responsibilities makes it an uncommon instrument of national security. The Coast Guard is not a navy, and strives to remain the world's best coastguard not the United States' second-best navy, a view underscored by Secretary of the Navy, Richard Danzig, in mid-October 1999:

Clearly it is in the best interests of the Nation to promote the long and highly effective relationship between the Navy and the Coast Guard. Cutters have been always ready to work with the Navy and answer the Nation's call, in both peace and war. It is essential that the Coast Guard remain a military service, properly equipped with ships and aircraft that are interoperable with Navy ships and aircraft, and manned with crews both trained in naval procedures and experienced in operating with the Navy. By working together, each bringing our respective strengths and expertise to the support of the other, the Navy and Coast Guard can provide an increasing return for America's investment in response to growing demands of the upcoming century.[12]

The U.S. Coast Guard is a vital element in the nation's maritime security future. It has put in place a plan and program and is fostering wide-ranging collaboration among U.S. departments and agencies that together are the foundation and linchpin for the next century of Coast Guard service – *Semper Paratus*... Always Ready – to America.



[10] Fargo and Riutta, *op.cit.*, p. 51.

[11] The Coast Guard's 1999 policy paper, “The United States Coast Guard: A Unique Instrument of National Security,” is included in the Appendix.

[12] Statement of the Secretary of the Navy and the Chief of Naval Operations to the Interagency Task Force on the Roles and Missions of the U.S. Coast Guard, provided to the Deputy Secretary of Transportation, Mortimer L. Downey, 12 October 1999, p. 7.